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V. 5

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/056,289	04/07/98	SHUTT J	98B017/2

IM62/1007

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EXAMINER	
TESKIN,F	
ART UNIT	**PAPER NUMBER**
1713	5

DATE MAILED: 10/07/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
09/056,289	Shutt, et al.
Examiner	**Group Art Unit**
Fred Teskin	1713

☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *three (3)* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *1-110* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☒ Claim(s) *70-80 and 95-100* is/are allowed.

☒ Claim(s) *1-69, 81-94, and 101-110* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). *2, 4*

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

1. Claims 1-110 are currently pending and under examination.

2. Claims 1-69 and 101-110 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(A) Claims 1, 15, 20, 32, 42, 50, 55, 60 and 65 [and claims dependent theron] are indefinite in the recitation "metallocene-type". It is unclear how "type" is intended to affect the accepted meaning of "metallocene".

(B) Claims 7, 8, 9 and 10 are indefinite due to lack of clear antecedent basis for "the at least one olefin" limitation.

(C) Claim 55 is indefinite as to the limiting effect of "essentially free". It is not clear from the supporting disclosure what "essentially free" means in terms of permissable amounts of internal, di- and tri-substituted olefins in the claimed process.

(D) Claim 66 is confusing in the use of Markush language where selection is from a single member. The language "selected from ... the group" is superfluous where only a single species of olefin is recited.

(E) Claim 101 [and claims dependent thereon] is indefinite due to lack of clear antecedent basis for "the alpha-olefin" (see line 6) and uncertainty as to the limiting significance of "fresh". It

is unclear what "fresh" means in terms of requisite degree of purity and/or age of the "commercial grade comonomer" to be used in the claimed process.

3. Claims 81-94 are rejected under 35 USC 112, first paragraph, as based on a disclosure which is not enabling. A bulky ligand transition metal metallocene catalyst system is considered critical or essential to the practice of the invention because the specification positively teaches the presence of such catalyst system as a requisite condition of the process to which the invention is directed (see page 6, ll. 18+). This subject matter is not, however, recited or otherwise included in claims 81-94. Claims which fail to include subject matter that is critical or essential to the practice of the invention are not enabled by the disclosure. In re Mayhew, 188 USPQ 356 (CCPA 1976).

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the

time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 103(c) and potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103(a).

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

6. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 55-59 are rejected under 35 U.S.C. § 102(b) or (e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over any one of EP 0 495 099 A1, Canich et al '126 and Canich '438 .

Each of the references shows the polymerization of ethylene and propylene comonomer in the presence of a bridged metallocene catalyst compound: see EP '099, Examples 6 and 11 on pp. 18 and 20; Canich et al, Example 45 and col. 31, line 36; and Canich, Examples 5 and 6 and col. 12, line 35. Inasmuch as the metallocenes used in these examples each contain a structural bridge joining two bulky ligands (i.e., indenyl or tetramethylcyclopentadienyl) which is consistent with applicants' definition of metallocene-type compounds having Hartree values within the range +0.24 to +0.36, such metallocenes would inherently possess an electronegativity value within the claimed range. As to the essential absence of internal di- and tri-substituted olefins: it is noted that propylene, having only three carbon atoms, does not appear capable of forming such internal olefin isomers, and therefore the exemplified processes are reasonably assumed to be operating "essentially free" of the specified internal olefins.

Should applicants argue that the exemplified polymerizations are not "continuous" as claimed, it would nevertheless have been obvious to one of ordinary skill in the art to convert a batch

polymerization to a continuous operation in view of the inherent efficiency of the latter in producing large, commercial quantities of polymer. In chemical processes, continuous operation is quite common, and conversion of batch to continuous operation would have been prima facie obvious. In re Korpi and Goldsby, 73 USPQ 229.

8. Claims 70-80 and 95-100 are allowable on the present record. Claims 1-54, 60-69, 81-94 and 101-110 would be allowable if amended or rewritten to overcome the rejections under 35 U.S.C. § 112 set forth in this Office action.

9. Any inquiry concerning this communication should be directed to Examiner F. M. Teskin whose telephone number is (703) 308-2456.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (703) 308-2450. The appropriate fax phone number for the organization where this application or proceeding is assigned is (703) 305-3599.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

FRED TESKIN
PATENT EXAMINER
ART UNIT ~~153~~ 1713

FMT/09-21-99